January 15, 1946

TO THE JOINT BOARD,
INTER COUNTY RIVER IMPROVEMENT
KING AND PIERCE COUNTIES, WASHINGTON.

GENTLEMEN:

Herewith we are pleased to submit for your approval the annual operating report covering the maintenance work performed during the year 1945, including detailed financial statement of expenditures.

WEATHER CONDITIONS

The weather thruout the past year prevailed unusually favorable as it effects the maintenance work undertaken.

With the exception of the last three days of December no high water has been experienced. The rainfall during December increased gradually, resulting in an increased runoff during the 28th to the 31st of the month reaching its peak on the 30th.

All reports available at this date indicate a greater per mile runoff in the White River watershed than in the Puyallup and Carbon River watersheds.

The operators at Mud Mountain Dam report a peak discharge of 12,800 second feet thru the by-pass tunnels, this however would have been somewhat greater had it not been that during the peak hours they stored approximately 5,000 second feet in the reservoir, which was released later on and after the flow in the upper channel had diminished.

From these reports we may assume tha the probable discharge peak of White River was somewhat near 17,500 to 18,000 second feet which was considerably under the peak discharge registered at 27,000 second feet during the December flood of 1933, the last major flood experienced in this river. It is difficult to explain just why the peak runoff from the combined river watersheds effecting this area was proportionately lower than that of the other rivers both north and south of here and also those in Oregon, all of which regeistered a greater runoff per square mile.

The U. S. G. S. gaging Station on the Puyallup River between Puyallup and Tacoma registered a peak discharge of 27,700 second feet occurring near midnight of December 28th.

GENERAL

Since the flood period occurring during the last three or four days of December we have now had opportunity to observe the effectiveness of the bank stabilization methods employed on this river since the major flood of 1933. Subsequent to that date rock riprap has been employed almost exlusively. We are pleased to report that in so far as we have been able to determine, none of the rock riprap channel slopes have been eroded or destroyed, which leads us to conclude that the use of properly placed rock riprap is undoubtedly preferable to any revetment previously used on this project.

The fact that this recent flood was approximately one-half the volume of that of 1933 prevents us from making accurate comparative deductions as to the effectiveness of the bank stabilization should we experience a flood of the 1933 volume. The peak

of the 1933 flood overflowed the banks of the river at many points, the destruction resulting from that flood was largely attributed to overflow as well as erosion of the revetment.

GENERAL OUTLINE OF MAINTENANCE WORK REQUIRED DURING 1946

1. The rebuilding of the right hand levee from Station 23+00 to Station 54+00, in the Reservation Section. This levee will be increased in height to correspond to the grade level of the left bank or opposite side. This will require approximately 7,000 cubic yards of fill material such as used during 1945 from Station 54+00 to Station 103+00 in this section.

2. At various points thruout the Reservation Section there are approximately three miles of concrete revetted slab slope built up from the brush mattress toe, this old decayed brush mattress offers little or no resistance to erosion, we therefore propose to reinforce this with an application of a rock blanket.

3. Thruout the entire river channel from Auburn to Tacoma we have observed numerous weak places in the old slab revetment which requires constant attention and must be reinforced before total collapse occurs during high water periods.

RESUME OF WORK PERFORMED DURING 1945.

The work performed thruout the year has for the most part been the maintenance of existing levees and revetment .

The last major flood thruout this area occurred during the winter season of 1933 and '34 destroying or seriously damaging extensive portions of the previously revetted levees, from the concrete Diversion Wall near Auburn to the lower terminus of this project at the City limits of Tacoma.

The Details of flood losses have been accurately recorded in former reports by your engineers and therefore need not again be recounted in this report except as it may be found necessary to qualify reference to certain maintenance or repair work that has been performed or is contemplated.

In this report we wish to differentiate between work which in our judgment should be done to prevent destruction to river banks and levees in the event of future floods of equal or greater magnitude than that experienced during 1933 and '34 and that work which is being performed to repair present flood control structures against normal erosive stream action.

Much theory has been advanced by those in charge of flood control and channel maintenance on rivers similar to those that fall with the province of the Inter County River Improvement project; whatever merit may be assigned to these theories relative to the cause and effect of erosion and accompanying reprecipitation of river borne silt, sand and gravel, only time and observation will determine their value.

The probable reoccurrance and intensity of future floods is a subject of considerable conjecture. Some authorities on this subject attempt to forecast, within reasonable limits, these reoccurring floods. However, we are confronted with the certainty that floods do and will occur. The destructive effect of these future floods will to a marked degree depend upon the preparation and maintenance with which we preserve our present channel structures.

We are informed that the necessary control mechanism at Mud Mountain Dam will be installed during the low water period of 1946, and this will, in all probability afford an opportunity to demonstrate the effectiveness of this structure as a flood control measure during future peak flood periods.

The regulated control at the Dam will result in the emponding of the flood waters during peak flood periods and should noticably decrease the flow thruout the lower river channel, however, there remains a drainage area of 98 square miles from the Dam to the confluence with the Puyallup River over which there is no control and from which , during periods of heavy precipitation, from four to six thousand second feet of water will drain into the White and Stuck River channels. This quantity added to the sixteen thousand second feet which will be allowed to pass thru the Dam during flood periods, will produce twenty -one to twenty-two thousand second feet, for which channel capacity must be provided, otherwise overflow and erosion losses will result.

The foregoing computations are herein included to illustrate the necessity for maintaining and stabilizing the existing channel levees if serious losses to existing control structures are to be avoided.

Following are the details of work performed during 1945, its location and extent.

1. AUBURN SECTION, Station 693+04 to Station 796+00.

As previously reported your consulting engineer, Mr. R. H. Thomson and I have examined the river channel in the vicinity of the Auburn Concrete Diversion Wall and decided to construct one or more rock groins along the face of the wall to deflect the force of the current from the face of the wall sufficiently to prevent undercutting which has occurred during the former flood periods to the extent of threatening its destruction.

To date one groin has been constructed at the upstream end of the wall. Another groin has been tentatively located, however we are awaiting the results obtained from the first groin before constructing another.

We also observed the incomplet levee on the right and left bank of the river immediately adjacent and upstream from the Highway Bridge south of Auburn, at Station 693 +00 , and we decided that in order to prevent overflow and to also reinforce the present levees it would be necessary to complete the levee on the left bank a distance of 350 feet in length, extending it downstream to join the bridge abutment, and also to complete the right bank adjacent to the bridge abutment extending this work upstream a distance of approximately five hundred feet and thoroly revetting both sides.

This work was accomplished and at present presents a completely revetted levee for protection against future floods. This operation required 1492 cubic yards of riprap rock on the right bank and 1804 cubic yards on the left bank.

We removed all drift wood that had accumulated thruout this Section.

2. COUNTY LINE SECTION, Station 625+00 to Station 693+04.

The river channel thruout this Section remains unchanged in so far as any erosive action has altered the existing bank stabilization. The Section due to change in gradient , is and no doubt will remain the area where a major portion of the river borne silt and gravel is deposited.

Efforts to remove this material by dredging during past years has been costly and resulted in but temporary relief as each succeeding flood brought down and deposited its burden of silt and gravel to the extent that at present the floor of the channel is but slightly below the banks on either side thruout portions of this Section. This condition invites overflow during flood periods.

To build the levees on either bank thruout this area to a higher elevation is not the solution to this problem. This was done in 1914 and '15 during the initial construction period when the river channel thru this Section was dredged and straightened and the levees built and revetted to a height sufficient to carry normal floods, however the precipitation of this river borne material accumulated rapidly to the extent that the first major flood overflowed the levees and revetment, resulting in almost total loss to the bank structures. In addition much adjacent land was laid waste by inundation and erosion.

Until some satisfactory method is devised to prevent the movement of this river borne material, this area where the gradient flattens out suddenly, will be the dumping grounds for much of this material, which is constantly moving down stream even at low stages

of water. As yet a solution to this problem has not been determined.

3. DIERINGER SECTION, Station 436+00 to Station 625+00.

During this year the U. S. Geological Survey, in cooperation with the Inter County River Improvement, completed the construction of an automatic recording river gaging station near the upstream terminus of this section, more accurately located on the right bank of the river at Station 622 +00.

In as much as there has never been an accurate stream flow measurement thruout the area between the Puget Sound Power and Light Company intake , on White River above Buckley and the tail race from the Dieringer Generating Station in this Section, it was decided to install a recording stream gauge to more accurately determine the stream flow thruout this area and thereby assist in determining the necessary channel dimension to carry future floods.

Several small erosion pockets were detected in this Section during the year and an application of riprap rock in the form of a blanket over these areas was required to prevent further erosion.

During the month of December a crew of laborers were employed to cut the growth of brush on both banks of the river.

4. ROESLI SECTION, Station 317+40 to Station 436+00.

During the early part of the year we completed the blanketing of the left bank near the North Fifth street bridge in Puyallup and also immediately under the bridge where the force of the current had been undercutting the old revetment.

During the month of December we removed all the brush and overhanging trees on the right bank. This brush cutting is quite necessary at least each alternate year to protect the banks

in event of high water tearing out some of the larger trees and thereby opening up the levee to rapid erosion.

5. PUYALLUP SECTION, Station 255+17 to Station 317+40

This Section remained quite stable thruout the year with but one exception, an erosion pocket developed on the left bank at Station 267 + 00 requiring the blanketing of the levee for a distance of approximately one hundred feet.

6. MURPHY SECTION, Station 185+69 to Station 255 + 17.

As noted in previous reports covering this Section, a considerable portion of levee and revetment on the left bank from Station 243+30 to 266 + 86 was destroyed by erosion during the flood of 1917. Since then numerous efforts had been made to rectify this erosion pocket which since that period has increased in width 280 feet at its widest point. Several years ago we undertook to construct a rock groin at this point parallel to the right bank and to preserve the normal channel width. This groin has been extended in length from time to time and at present is 780 feet in length. To our satisfaction this groin as it now operates, prevents further erosion on the left bank and at the same time permits the deposit of river borne silt between the groin and the left bank to the extent that this deep erosion pocket, which had been as much as fourteen feet below the normal stream bed is now less than two feet.

To completely construct this groin to its lower terminus where it will join the originally constructed left bank, it must be extended a distance of approximately three hundred feet.

This work we anticipate completing during 1946.

During the past year we repaired the toe of the concrete revetment on the right bank with an application of a rock blanket between Stations 187+00 to Station 190+00 a distance of 300 feet.

7. RESERVATION SECTION, Station 0+00 to Station 185+69

During the year we reinforced the right bank revetment with an application of rock blanket at the toe of the slope between Stations 139+00 and 150+00 a distance of 1100 lineal feet. This was necessitated by erosion that had destroyed a greater part of the old brush mattress placed there during the initial construction period when the new river channel was built.

As previously reported, we have during the past two years repaired the right bank levee by increasing its height to that of the left bank. This was begun during the summer months of 1944 starting at Station 250+00 extending down stream to Station 103+00 a distance of 2.78 miles. In this area we placed 41,944 cubic yards of well chosen material, a mixture of gravel and clay which compacted to hard mass that will resist erosion, should a future flood rise to the height of overflow.

During the past year we continued this work of levee repair, starting at Station 103+00 extending down stream to Station 54+00 a distance of approximately 0.93 miles. In this area we placed 22,465 cubic yards of the same material as used the previous year. The elevation of this completed levee is now equal to the left hand river bank to Station 54+00.

In addition to the levee repair we also constructed

eleven rock groins along the right bank between Station 129+23 and Station 150+00. These groins extend out from the toe of the revetment at an angle of approximately 45 degrees to the axis of the stream, the spacing being determined by the stream velocity as it tended to impinge upon the right bank. Thruout this area between Station 129+00 and 150+00 there has been a pronounced erosion at the toe of the concrete revetment lowering the floor of the stream to a depth of fourteen feet below the toe of the concrete slab. This condition was extremely hazardous if allowed to continue and for this reason it was decided to construct a series of groins in an effort to deflect the force of the current away from the right bank.

The recent high water period of December 28th to 31st justified the construction of these groins as the stream action was deflected sufficiently to avoid erosion and in addition to this there was a pronounced silting action between the groins thereby filling in the former erosion pocket that seriously threatened the right bank levee.

In conclusion I wish to acknowledge the assistance and advice I have received from your able and conscientious Consulting Engineer, Mr. R. H. Thomson, who at all times has cheerfully rendered most valuable council.

Attached hereto are the expenditures and financial statements for the year 1945.

Respectfully submitted,

F. H. Essig

F. H. Essig, Chief Engineer

PUYALLUP RIVER IMPROVEMENT
QUARRY COST FOR THE MONTH OF OCTOBER 1945

ITEM	PUYALLUP RIVER	INTER COUNTY	TOTAL
Shovel operation	$217.50		$217.50
Industrial Insurance	11.21		11.21
Shovel Oiler	138.55		138.55
Drillers	429.76		429.76
Watchman	155.10		155.10
Shovel Gas-Oil	60.62		60.62
Comp. Gas-Oil	22.95		22.95
T-59 Gas-Oil	2.90		2.90
Comp. repair parts	7.66		7.66
Supervision	240.08	150.00	390.08
Powder , caps		123.58	123.58
	1,286.33	273.58	1,559.91
Equipment Rental	348.00	150.00	498.00
	1,634.33	423.58	2,057.91
Previous Months	14,838.55	5,519.87	20,358.42
Total cost to date	16,472.88	5,943.45	22,416.33

ROCK TAKEN TO NOVEMBER 1st, 1945

Deliveries to October 1st	15,145 c.y.	8,298 c.y.	23,443.c.y.
October Deliveries	2,276	832	3,108
	17,421	9,130	26,551

26,551 c.y. cost $22.416.33 or .8442 / c.y.

I.C.R.I. 9,130 c.y. @ .844 or $7,707.55

Puy. River 17,421 c/y/ @ .844 or $14,706.81

Inter County owes Puyallup River shovel Rental as follows

July	$54.54	
Aug.	400.00	
Sept.	400.00	
Oct.	52.00	
	906.54	
Less shovel repairs	109.21	Labor
	$ 797.33	

INTER COUNTY RIVER IMPROVEMENT

OCTOBER 1945

UNIT WORK COST OCTOBER

SUPERVISION

Salaries	$ 305.00
Industrial Insurance	1.82
Car Operation	6.89
Telephone	15.65
Janitor	75.00
Total	$404.36

QUARRY

Powder and caps	123.58
Supervision	150.00
Total	$ 273.58

ROCK HAUL

Contract Trucks	$1,471.02

ROCK PLACING

Labor	182.42
Industrial Insurance	2.52
Gas-Oil	9.46
Dozer Rental	190.00
Total	$ 384.40
Supervision	154.36
Total	$ 538.76

CHANNEL CLEARING

Labor	$ 122.88
Industrial Insurance	1.76
Total	$ 124.64

U.S.G.S.

U. S. Geological Survey	$ 99.85

UNIT WORK COST cont.

EQUIPMENT MAINTENANCE

Compressor # 1 Parts	$ 6.95
Ford Flat Truck	4.64
Total	$ 11.59

ENGINEERING AND SURVEY

Salary	300.00
Industrial Insurance	1.51
Gas-Oil	6.90
Total	$ 308.41

NORTH BANK LEVEE

Shovel Gas-Oil	10.30
Labor	254.00
Ind. Ins	2.87
Move Shovel	104.00
Haul Gravel	572.60
Bull Dozer Rental	120.00
	1063.77
Supervision	100.00
Total	$ 1163.47

SWAN CREEK

Powder from quarry	3.44

RECAPITULATION OF UNIT WORK COST

QUARRY	273.58
ROCK HAUL	1471.02
ROCK PLACED	538.76
CHANNEL CLEARING	124.64
U. S. G.S	99.85
EQUIPMENT MAINTENANCE	11.59
ENGINEERING & SURVEY	308.41
NORTH BANK LEVEE	1163.47
SWAN CREEK	3.44
Total Operating cost	$ 3994.76

OCTOBER EXPENDITURES

Vouchers Issued in October	3,834.97
Inventory Gas-Oil Powder etc. Oct. 1	805.36
	4,640.33
Inventory November 1	645.57
	3,994.76

BUDGET

	PIERCE	KING	TOTAL
1945 Budget	$20,500.00	$30,000.00	$50,500.00
Expenditures to October 1	16,887.91	28,272.89	45,160.80
Balance October 1st	3,612.09	1,727.11	5,339.20
October Expenditures	3,479.26	355.71	3,834.97
Balance November 1st	132.83	1,371.40	1,504.23
Money Deposited with County Treasurers to credit I.C.R.I.	3,523.60	5,107.58	8,631.18
	3,656.43	6,478.98	10,135.41

PUYALLUP RIVER IMPROVEMENT

QUARRY COST FOR THE MONTH OF NOVEMBER 1945

ITEM	PUYALLUP RIVER	INTER COUNTY	TOTAL
Labor	$ 617.40	$ 188.92	$806.32
Insurance	50.35	13.15	63.50
Shovel Gas-Oil	44.95		44.95
Misc. Supplies	49.32	5.93	55.25
Compressor Gas-Oil	25.61		25.61
Welder Gas	5.54		5.54
Light Plant	.60		.60
Anti Freeze	46.98		46.98
Repair Shovel		118.11	118.11
Powder caps and fuse		103.18	103.18
Quarry Development		119.60	119.60
Puyallup River Poweder		2.10	2.10
	840.75	550.99	1,391.74
Supervision	236.80	151.30	388.10
Equipment Rental	200.00	150.00	350.00
	1,277.55	852.29	2,129.84
Previous Months	16,472.88	5,943.45	22,416.33
Total cost to date	$17,750.43	$ 6,795.74	$ 24,546.17

ROCK TAKEN TO DECEMBER 1st, 1945

Deliveries to November 1st	17,421 c.y.	9,130 c.y.	26,551 c.y.
Deliveries to December 1st	1,556	1,184	2,740
	18,977	10,314	29,291

INTER COUNTY RIVER IMPROVEMENT

NOVEMBER 1945

UNIT WORK COSTS FOR MONTH

SUPERVISION

Salaries	$330.00
Industrial Insurance	1.51
Car Operation	9.02
Office Supplies	5.22
Telephone	14.50
Lights	2.30
Janitor	72.56
Taxes	1.03
	$ 436.14

QUARRY

Mis. Supplies	5.93
Drillers	160.80
Industrial Insurance	13.15
Shovel Operator and Oiler	28.12
Repair Shovel	118.11
Powder and caps used	103.18
Quarry Development	119.60
Puy. River Imp. Powder	2.10
	550.99
Supervision & Insurance	151.30
	$ 702.29

ROCK HAUL

Contract Trucks	$ 1,757.05

ROCK PLACING

Labor	196.00
Industrial Insurance	2.60
Gas-Oil	4.51
	206.11
Supervision	145.38
	$ 348.49

CHANNEL CLEARING

Labor	194.40
Industrial Insurance	2.88
Gas-Oil	1.77
	199.05
Supervision	145.38
	$ 344.43

UNIT COST CONTINUED
NOVEMBER 1945

U. S. Army Gravel .....$ 7.64

EQUIPMENT MAINTENANCE

Labor	10.80
Compressor # 1	$19.11
Drilling Equipment	32.20
Tools	19.57
	$ 81.68

ENGINEERING

Salaries and supplies $270.38

North Bank Levee

Truck Hire (July).....$ 24.12

RECAPITULATION OF UNIT WORK COST

QUARRY	$ 702.29
ROCK HAUL	1,757.05
ROCK PLACEMENT	348.49
CHANNEL CLEARING	344.43
U. S. ARMY GRAVEL HAUL	7.64
EQUIPMENT MAINTENANCE	81.68
ENGINEERING	270.38
NORTH BANK LEVEE	24.12
TOTAL OPERATING COST	$ 3,536.08

NOVEMBER EXPENDITURES

Vouchers Issued in November	$ 3,415.50
Inventory Gas-Oil, Powder , caps Nov. 1	645.57
	4,061.07
Inventory Dec. 1	524.99
	3,536.08

1945 BUDGET
INTER COUNTY RIVER IMPROVEMENT

	PIERCE COUNTY	KING COUNTY	TOTAL
1945 Budget	$20,500.00	$30,000.00	$50,500.00
Contribution by State Cons. made available by Res. 1966	3,091.73	.....	3,091.73
	23,591.73	30,000.00	53,591.73
Expenditures to Nov. 1	20,367.17	28,628.60	48,995.77
	3,224.56	1,371.40	4,595.96
Expended in November	3,381.00	34.50	3,415.50
	156.44 (RED)	1,336.90	1,180.46
Money Deposited with Treasurers from State Cons. & Dev. and other	1,756.70	7,698.82	9,455.52
	$ 1,600.26	$ 9,035.72	$10,635.98

QUARRY COST FOR THE MONTH OF DECEMBER 1945

	Puyallup River	Inter County	Total
Labor		$606.00	$606.00
Dozer Rental		130.00	130.00
Industrial Insurance		34.11	34.11
Rented Trucks		207.76	207.76
Gasoline		40.89	40.89
Supervision	236.80	150.00	386.80
Watchman	151.81		151.81
Powder Used		12.00	12.00
	$ 388.61	$ 1,180.76	$ 1,569.37
Equipment Rental Shovel 2/18 of $400.00	66.00	150.00	216.00
Total Expended in December	$ 454.61	$ 1,330.76	$ 1,735.37
Expended Previous Months	17,750.43	6,795.74	24,546.17
	$18,205.04	$ 8,126.50	$ 26,331.54

ROCK TAKEN TO DECEMBER 31, 1945

Deliveries to December 1st	18,977 c.y.	10,314 c.y.	29,291 c.y.
December Deliveries	None	None	

$26,331.54 divided by 29,291 equals .89896 per cubic yard

Inter County River took 10,314 c.y. @ .89896 equals	$9,271.87
Inter County Spent	8,126.50
Inter County underpaid for rock	$1,145.37
Puyallup River took 18,977 c.y. @ .89896 equals	17,059.56
Puyallup River Spent	18,205.04
Puyallup River Overpaid for rock.....	$ 1,145.48

INTER COUNTY RIVER IMPROVEMENT
DECEMBER 1945

UNIT WORK COSTS

SUPERVISION

Salaries	$480.00
Industrial Insurance	2.67
Studebaker Car Expense	17.14
Office Supplies	7.01
Water Rent	5.25
Telephone	16.10
Janitor	18.75
Fuel Oil	15.00
	561.92

QUARRY OPERATION

Quarry Development	
Wages	$ 606.00
Dozer Rental	130.00
Industrial Insurance	34.11
Rented Trucks	207.76
Gasoline	40.89
Powder Used	12.00
	1,030.76
Supervision	150.00
	$1,180.76

CHANNEL CLEARING

Wages	$ 487.80
Industrial Insurance	6.98
Gasoline	1.74
	496.52
Supervision	205.96
	702.48

U. S. G. S.

U. S. Gaging Station Contract	$ 45.42

U. S. Army Gravel

Checker for gravel sold to U. S. Army	$ 103.10

EQUIPMENT MAINTENANCE

Parts and repairs.	$ 53.90

ENGINEERING

Salaries	$330.96
Expenses	34.91
	$ 365.87

RECAPITULATION

QUARRY OPERATION	$1,180.76
CHANNEL CLEARING	702.48
U. S. GAGING STATION CONTRACT	45.42
CHECKING GRAVEL SOLD TO U. S. ARMY	103.10
EQUIPMENT MAINTENANCE	53.90
ENGINEERING	365.87
Total Operating Cost for December	$ 2,451.53

DECEMBER EXPENDITURES

Vouchers Issued in December	$ 2,388.59
Inventory Gas-Oil, Powder, Dec. 1st	524.99
	2,913.58
Less Inventory January 1st, 1946	462.05
	$ 2,451.53

1945 BUDGET

	Pierce County	King County	Total
1945 Budget	$20,500.00	$30,000.00	$50,500.00
Contribution by State Dept. Cons. & Development, available by			
Resolution # 1966	3,091.73		3,091.73
Resolution # 1894	1,756.70		1,756.70
	25,348.43	30,000.00	55,348.43
Expenditures to December 1st	23,748.17	28,663.10	52,411.27
	1,600.26	1,336.90	2,937.16
Expenditures in December	1,293.95	1,094.64	2,388.59
Balance December 31st	306.31	242.26	548.57

State Dept. Cons. & Dev. Contribution and Gravel Sale deposited with King County but not made available $ 7,698.82

As of December 31st, 1945 there was 3,000 cubic yards of quarried rock on the quarry floor available for delivery, valued at $0.44 per cubic yard. This represents a quarrying cost of $1,320.00 . The cost to produce this rock was equally divided between the Inter County River Improvement and the Pierce County Puyallup River Improvement.

On and after January 1st, 1946, all quarrying operations will be performed by the Puyallup River Improvement, the Inter County River Improvement has a credit of one-half the value of the quarried rock on hand or $660.00 as indicated herewith.

BALANCE SHEET ON QUARRY OPERATION.

Rock Taken	Inter County	Puyallup River
10,314 c.y. @.89896	$ 9,271.87	
18,977 c.y. @.89896		$17,059.56
Money actually spent	6,126.50	18,205.04
	$ 1,144.37	$ 1,145.48

Credits Due I.C.R.I.

4860 # Powder on hand at quarry Jan. 1 @ $12.00	$576.00
I.C.I. repairs to county shovel	21.82
1500 c.y. rock on quarry floor @ .44/ c.y.	660.00
Overpaid on rock 1944	673.20
Powder used at Swan Creek (Pierce County)	3.44
	$ 1,934.46

Inter County owes Pierce County	
Puyallup River Improvement Shovel Rental	797.33
July, Aug. & Sept. Oct.	
See October Report herewith	$ 1,137.13

Inter County Underpaid for rock in 1945	$ 1,145.37
Less credit as shown above	1,137.13
	$ 8.24

STATEMENT OF FUNDS DUE THE INTER COUNTY RIVER IMPROVEMENT

KING COUNTY ROAD DISTRICT NO. 1

In 1940 - One 92 H.P. Buda Deisel Engine and Hoist	$1800.00
Credit sale of Hoist to Wash. Machinery	750.00
Balance due.....	1050.00

KING COUNTY ROAD DISTRICT NO. 2

In 1938 - One Dandie Mixer No. 10487 Size 107-S	100.00
Balance due from King County.....	$ 1150.00

PIERCE COUNTY ROAD DISTRICT NO. 1

In 1945- One Champion 16" Lathe	$ 1000.00

IN ACCORD WITH RESOLUTION ADOPTED BY THE JOINT BOARD SEPTEMBER 21st, 1945 THE FOLLOWING INVENTORY OF TOOLS AND EQUIPMENT WAS SOLD TO PIERCE COUNTY PUYALLUP RIVER IMPROVEMENT FOR QUARRY OPERATION, SAME TO BE IN EFFECT JANUARY 1st, 1946.

No.	Item	Present Inventory Value
1.	2 Drills, Gardner Denver S 55	$ 50.00
2.	4 " " " S 45	100.00
3.	1 Grinder, Rock Bit Carlson Model G Quickway	100.00
4.	1 Garco Light Plant	100.00
5.	2 Galvameter	30.00
6.	1 one gal. oil Dispenser	1.00
7.	1 Set Walworth Stock & Dies 1" & 2"	5.00
8.	1 Chain Hoist Block 1½ Ton Yale	10.00
9.	1 Drill Tripod Machine	100.00
10.	1 Jack Track 15 Ton	5.00
11.	1 Black & Decker Drill	10.00
12.	1 Generator Welding (used) 200 Amp. 65 H.P. Chrysler Engine	300.00
13.	1 Welding and Cutting Equipment	35.00
14.	2 Wash. # 780 8" Blocks	2.00
15.	1 Air Compressor Ingersoll Rand Type 20	1,000.00
16.	1 Air Compressor Schramm Fordair T 20	400.00
17.	1 Puller, Steel & Handle Reamer	45.00
18.	1 Blasting Machine Dupont # 50	25.00
19.	7 Bridge Bits	7.00
20.	1 Blow Torch	1.00
21.	1 Bolt Cutter # 14	2.00
22.	1 Chain Binder	1.00
23.	1 Maul	.50
24.	1 Pipe cutter	2.00
25.	1 Splicing Tool	.50
26.	3 Timber Carriers	3.00
27.	1 Pipe Vice #402-y	10.00
28.	2 Wrenches Pipe 18" and 24"	1.00
29.	1 Wrench Crescent 14"	1.50
30.	1 Vertical Screw Press 2½"	150.00
31.	2 Air Tanks 20" x 120"	40.00
32.	1 Air Tank 20" x 60"	15.00
33.	2 Airline Oilers	22.00
34.	630 ft. 1" Galv. Pipe)	
35.	200 ft. 1¼ Blck Pipe) at .04 ft	41.20
36.	200 ft. 1½ " ")	
37.	150 pieces pipe fitting (assorted)	20.00
38.	5 2" Lunkin Hiemer Globe valves)	
39.	3 1¼ " " ") 18 valves	15.00
40.	10 1" " " " ") Value.....	$ 2,551.70

60% owned by King County.....$1,531.02
40% " " Pierce " 1,020.68
$ 2,551.70